

Exhibit 45

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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION**

IN RE CATHODE RAY TUBE (CRT)
ANTITRUST LITIGATION

ELECTROGRAPH SYSTEMS, INC.;
ELECTROGRAPH TECHNOLOGIES CORP.,

Plaintiffs,

v.

HITACHI, LTD., et al.,

Defendants.

Case No. 11:-cv-01656-SC

Master File No. 3:07-cv-05944-SC

MDL No. 1917

ELECTROGRAPH SYSTEMS, INC.;
ELECTROGRAPH TECHNOLOGIES CORP.,

Plaintiffs,

v.

TECHNICOLOR SA (f/k/a THOMSON SA), et al.,

Defendants.

Case No. 13-cv-05724-SC

Master File No. 3:07-cv-05944-SC

MDL No. 1917

REPORT OF ALAN S. FRANKEL, Ph.D.

April 15, 2014

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1. Introduction

1.1. Assignment

1. Plaintiff Electrograph Systems, Inc. (“Electrograph Systems,” and, together with Plaintiff Electrograph Technologies Corp., “Electrograph”) is a New York corporation with a principal place of business in New York.¹ Until May 2009, Electrograph Systems operated as a value-added wholesale distributor of information technology products, including computers and cathode ray tube (“CRT”) monitors.² Electrograph Technologies Corp. conducted business as an information technology solutions provider until May 2004.³ Electrograph has described itself as “one of the nation's largest display technology distributors.”⁴

2. Electrograph alleges that it acquired Coastal Office Products, Inc. in January 1998,⁵ formed wholly-owned subsidiary Champion Vision, Inc. in June 2003, and acquired technology wholesale distributors ActiveLight, Inc. and CineLight Corporation in February 2006, and International Computer Graphics, Inc. in June 2006.⁶ Electrograph is asserting claims for purchases of CRT Products – in Electrograph’s case, computer monitors that contained CRTs –

¹ Second Amended Complaint, *Electrograph Systems Inc. and Electrograph Technologies Corp. v. Hitachi, Ltd., et al.*, October 3, 2013, (“Amended Complaint”), ¶18.

² *Id.*

³ Electrograph Technologies Corp. was incorporated under the name Manchester Equipment Co., Inc. in 1973, and operated under that name until February 2001, when its name was changed to Manchester Technologies, Inc.; its name was changed to Electrograph Technologies Corp. in August 2005. Amended Complaint, ¶21.

⁴ See, e.g., Electrograph Press Release, June 19, 2007, <http://www.prnewswire.com/news-releases/electrograph-showcases-industrys-hottest-new-technologies-at-infocomm-international-2007-58172187.html><http://www.prnewswire.com/news-releases/electrograph-showcases-industrys-hottest-new-technologies-at-infocomm-international-2007-58172187.html>. Electrograph Systems ceased operations in 2009. See, “Electrograph Systems Enters Liquidation Process,” press release, May 29, 2009, <http://www.avsforum.com/t/1152207/electrograph-systems-enters-liquidation-process>.

⁵ Amended Complaint, ¶¶31-32.

⁶ CineLight Corporation was subsequently merged into ActiveLight, Inc. in July 2006, and ActiveLight, Inc., International Computer Graphics, Inc., Champion Vision, Inc., and Coastal Office Products, Inc. were merged into Electrograph Systems in 2008. Amended Complaint, ¶¶23-33.

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by each of these predecessor entities. During the period at issue in this case, Electrograph and its predecessors purchased CRT Products from manufacturers and vendors in the United States, and conducted substantial business in both New York and California.⁷

3. Electrograph alleges that the Defendants and alleged co-conspirators colluded in setting prices of CRTs and that this caused Electrograph to pay higher prices for CRT Products than it would have paid absent the conspiracy.⁸

4. I have been asked by counsel for Electrograph to: (1) calculate damages under the assumption that the Defendants are found to be liable in this litigation; (2) assume that the alleged conspiracy resulted in anticompetitive overcharges for CRTs – the tubes incorporated into the CRT Products purchased by Electrograph – as determined by Dr. James McClave, another expert retained by Electrograph; (3) compute damages to account for the possibility that some overcharges resulting from the conspiracy might not be recoverable to the extent that they reflect CRTs manufactured by non-conspirators; and (4) calculate damages for Electrograph’s “direct” purchases of CRT Products from conspirators or their affiliates separately from its “indirect” purchases of CRT Products from other suppliers.

1.2. Qualifications

5. I am Director of Coherent Economics, LLC. Since 1985, I have been a full-time economic consultant. From 1985 until 1996, and from 2004 until I founded Coherent in 2008, I was an employee of Compass Lexecon (formerly Lexecon), most recently as a Senior Vice

⁷ Amended Complaint”, ¶¶31-32.

⁸ First Amended Complaint, Electrograph Systems Inc. and Electrograph Technologies Corp. v. Hitachi, Ltd., et al., March 10, 2011, (“Amended Complaint”), ¶222. The conclusions and computations that I present in this report would either be unaffected by changes to the current Defendants and co-conspirators or could be modified through simple adjustments as described in this report to account for such changes.

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units purchased by Electrograph (while setting indirect units to zero) for the period 1995Q2 through 1996Q2.

36. Exhibit 15 lists the CRT Product vendors appearing in Electrograph's data that Electrograph contends represent "direct" purchases as defined or to be defined legally. I designate CRT Products purchased from any other vendors to be "indirect." Exhibit 16a shows Electrograph's purchases of CRT monitors.

4.2.2. Matching CRT Product Sizes to CRT Sizes

37. Monitor purchases are tracked by size and are matched to the appropriate CDT size. Monitors and the CDTs incorporated within each monitor are generally the same size. Thus, the major CDT sizes are the same as the major monitor sizes: 14", 15", 17", and 19" (and 21" to a lesser extent). The pattern is apparent when comparing the tube sizes in data provided to me by Dr. McClave with the TV and monitor sizes included in the purchase records of fifteen firms.²⁹ Infrequently (across all of the firms for which I have compiled purchase data), I identified a few monitor units that were described with sizes not corresponding to the typical CDT sizes. In those cases, I combine the uncommon size with the most logical adjacent size. Finally, although it is generally easy to establish the size of a monitor from the model number or description, in a number of instances it was not possible to determine the size of a particular monitor model. In those cases, I conservatively assumed that a monitor was a 14-inch model.

4.2.3. Estimating Purchases When Purchase Database Records are Unavailable

38. For the period before 1997Q4, I use the Electrograph accounts payable data to estimate unit purchases from two direct suppliers, Hitachi and NEC. Exhibit 16b shows the

²⁹ For example, the largest quantity of monitors by size were 17-inch models, and the largest quantity of CDT unit sales, by size, in Dr. McClave's data is also the 17-inch size, while there are no 18-inch CDTs.

Exhibit 15 - Vendors Designated as "Direct" Purchases

Plaintiff	Conspirator	Direct Vendor Names Appearing in Data
Electrograph	Hitachi	HITACHI AMERICA LTD - HED HITACHI AMERICA LTD COMP DIV NISSEI SANGYO AMERICA LTD
	LGE	LG ELECTRONICS INC
	Mitsubishi	MITSUBISHI CONSUMER ELECTRONICS AMERICA MITSUBISHI DIGITAL ELECTRONICS AMERICA I
	Mitsubishi	MITSUBISHI ELECTRONICS AMER MITSUBISHI ELECTRONICS AMERICA INC NEC COMPUTER SYSTEMS DIVISION NEC COMPUTER SYSTEMS DIVISION PACKARD BE NEC DISPLAY SOLUTIONS NEC SOLUTIONS (AMERICA) INC NEC SOLUTIONS AMERICA INC NEC TECHNOLOGIES INC NEC-MITSUBISHI ELECTRONICS DISPLAY OF AM PACKARD BELL NEC INC
	Panasonic	JVC AMERICAS CORP PANASONIC (PBTSC) CAMCORDER PANASONIC COMM & SYSTEMS CO PANASONIC COMM SYSTEMS COMPANY PANASONIC DOCUMENT IMAGING COMPANY
	Philips	PHILIPS BUSINESS SOLUTIONS PHILIPS CONS ELECTRONICS PHILIPS CONSUMER ELECTRONICS
	Samsung	SAMSUNG ELECTRONICS SAMSUNG ELECTRONICS AMERICA
	Toshiba	TOSHIBA AMERICA INC TOSHIBA AMERICA INC ISD TOSHIBA AMERICA INFORMATION SYSTEMS INC